

**II. CLAIMS**

1. (Previously Presented) A method for selecting, in an electronic product catalog system (1), a question to be presented to a user of the system (1) to assist identification of a suitable product from a set of potentially suitable products according to the user's needs, the question being selected from a group of questions stored in said system (1), which method comprises:

processing product data stored in said system (1), defining features of products in said set and product scores associated with respective products in said set, and rule data stored in said system (1), defining rules relating answers associated with said questions to product feature constraints, to calculate question scores ( $Q_s$ ) for respective said questions such that the question score ( $Q_s$ ) for each question is dependent on one of (a) the product scores of any products excluded from said set if said rule relating to an answer associated with that question is effective, and (b) the product scores of any products retained in said set if said rule relating to an answer associated with that question is effective; and  
selecting the question to be presented to the user in dependence on said question scores ( $Q_s$ ).

2. (Previously Presented) A method as claimed in claim 1 wherein the question score ( $Q_s$ ) for each question is dependent on one of:

- (a) for each said rule relating to any answer associated with that question, the product scores of any products excluded from said set if that rule is effective; and
- (b) for each said rule relating to any answer associated with that question, the product scores of any products retained in said set if that rule is effective.

3. (Previously Presented) A method as claimed in claim 2 including:

processing said product data and said rule data to calculate weights ( $W_R$ ) for respective said rules such that the weight ( $W_R$ ) for each rule is dependent on one of (c) the product scores of any products excluded from said set if that rule is effective, and (d) the product scores of any products retained in said set if that rule is effective;

for each rule, assigning answer scores ( $A_s$ ) dependent on the weight ( $W_R$ ) of that rule to the answers to which that rule relates; and

calculating said question scores ( $Q_s$ ) such that the question score ( $Q_s$ ) for each question is dependent on the answer scores ( $A_s$ ) for the answers associated with that question.

4. (Previously Presented) A method as claimed in Claim 1 wherein the question score ( $Q_s$ ) for each question is dependent on only one of (a) and (b).

5. (Previously Presented) A method as claimed in Claim 1 wherein the product scores are predetermined in said system (1) for respective products.

6. (Previously Presented) A method as claimed in claim 5 wherein said product scores comprise, for each product, a group of product scores each associated with a different set of predefined user needs, and wherein the method includes selecting from the group of product scores for a product the product score corresponding to a current set of user needs.

7. (Previously Presented) A method as claimed in Claim 5 wherein said product scores comprise product probabilities each indicative of a probability of the associated product being suitable for the user.

8. (Previously Presented) A method as claimed in claim 7 wherein said product probabilities are product reject probabilities each defining the probability of the associated product being rejected as a suitable product for the user.

9. (Previously Presented) A method as claimed in claim 8 wherein a weight ( $W_R$ ) for each rule is dependent on the sum of the reject probabilities of any products excluded from said set if that rule is effective.

10. (Previously Presented) A method as claimed in Claim 1 including calculating the product scores associated with

respective products in dependence on values assigned to product features by said rules.

11. (Previously Presented) A method as claimed in Claim 3 wherein the weight ( $W_R$ ) for each rule is dependent on a resultant set value, which value is dependent on product scores of at least a subset (FS) of any products retained in said set if that rule is effective.

12. (Previously Presented) A method as claimed in claim 11 wherein the weight ( $W_R$ ) for each rule is dependent on the difference between a current set value, dependent on the product scores of at least a subset (FS) of the products in said set, and said resultant set value.

13. (Previously Presented) A method as claimed in Claim 11 wherein said product scores comprise, for each product, a buyer score indicative of the expected suitability of the product for the user, and a seller score, indicative of the benefit to the product supplier associated with sale of the product, and wherein the or each said set value is dependent on the buyer score and seller score of each product in said subset (FS).

14. (Previously Presented) A method as claimed in claim 13 wherein the or each set value is further dependent on additional data stored in said system.

15. (Previously Presented) A method as claimed in Claim 1 wherein, for each said question, answer probabilities indicative of the probability of a user providing respective answers associated with that question, are pre-stored in the system, and wherein the question score (Q<sub>s</sub>) for each question is also dependent on the answer probabilities for respective answers associated with that question.

16. (Previously Presented) A method as claimed in claim 15 wherein, for each answer, a plurality of answer probabilities are pre-stored in the system, each answer probability indicating the probability of a user providing that answer for a different set of predefined user needs, and wherein the method includes selecting for a said answer the answer probability corresponding to a current set of user needs.

17. (Previously Presented) A method as claimed in Claim 1 wherein said set of potentially suitable products is determined by previous interaction of the user with said system.

18. (Previously Presented) A method as claimed in claim 17 including receiving data defining said set of potentially suitable products from a feature-based filtering component (2) of said system (1).

19. (Previously Presented) A method as claimed in Claim 1 including supplying the selected question for display to the user.

20. (Previously Presented) A method as claimed in Claim 19 including supplying at least some answers associated with the selected question for display to the user.

21. (Previously Presented) A method as claimed in Claim 20 including supplying the answers for display in an order dependent on the answer scores (As) thereof.

22. (Previously Presented) A method as claimed in Claim 19, including, after supplying the selected question for display to the user:

receiving from a feature-based filtering component (2) data indicative of the answer given by the user in response to the selected question; and

determining whether any of the rules are effective based on the user's answer, and if so supplying data indicative of any products eliminated from said set of products to the feature-based filtering component (2).

23. (Previously Presented) A method as claimed in Claim 1 including, prior to selecting said question to be presented to a user:

generating question data, comprising said group of questions, and storing the question data in said system (1);

generating catalog data, including said product data for products in said set, defining features of catalog products and product scores associated with respective products, and storing the catalog data in said system (1); and

generating said rule data and storing the rule data in said system (1).

24. (Previously Presented) Apparatus (3) for selecting a question to be presented to a user of an electronic product catalog system (1) to assist identification of a suitable product from a set of potentially suitable products according to the user's needs, the apparatus comprising:

memory (14) for storing question data, comprising a group of questions from which a question is to be selected, product data, defining features of products in said set and product scores associated with respective products in said set, and rule data defining rules relating answers associated with said questions to product feature constraints; and

control logic (8) configured to process said product data and said rule data to calculate question scores ( $Q_s$ ) for respective said questions such that the question score ( $Q_s$ ) for each question is dependent on one of (a) the product scores of any products excluded from said set if said rule

relating to an answer associated with that question is effective, and (b) the product scores of any products retained in said set if said rule relating to an answer associated with that question is effective;

wherein the control logic (8) is configured to select the question to be presented to the user in dependence on said question scores ( $Q_s$ ).

25. (Previously Presented) Apparatus as claimed in claim 24 wherein the control logic (8) is responsive to receipt, from a feature-based filtering component (2) of said system (1), of data defining said set of potentially suitable products to calculate said question scores and select the question to be presented to the user, the control logic (8) being further configured to supply the selected question to the feature-based filtering component (2) for display to the user.

26. (Previously Presented) An electronic product catalog system (1) comprising apparatus as claimed in claim 24.

27-28. (Cancelled)

29. (Previously Presented) The method of claim 1 wherein the calculation of the question scores further comprises:

weighing an answer score for each answer associated with a question according to an answer probability specified for an answer to the question; and

summing the answer scores for the answers associated with that question.

30. (Previously Presented) A computer program product comprising:

a computer useable medium having computer readable code means embodied therein for causing a computer to select, in an electronic product catalog system (1), a question to be presented to a user of the system (1) to assist identification of a suitable product from a set of potentially suitable products according to the user's needs, the question being selected from a group of questions stored in the system (1), the computer readable code means in the computer program product comprising:

computer readable program code means for causing a computer to process product data stored in the system (1), define features of products in the set and product scores associated with respective products in the set, and rule data stored in the system (1), define rules relating answers associated with the questions to product feature constraints, to calculate question scores ( $Q_s$ ) for respective questions such that the question score ( $Q_s$ ) for each question is dependent on one of (a) the product scores of any products excluded from the set if the rule relating to an answer associated with that question is effective, and (b) the product scores of any products retained in the set if the rule relating to an answer associated with that question is effective; and;

computer readable program code means for causing a computer to select the question to be presented to the user in dependence on the question scores ( $Q_s$ ).

31. (Previously Presented) An article of manufacture comprising:

a computer useable medium having computer readable program code means embodied therein for causing a computer to select, in an electronic product catalog system (1), a question to be presented to a user of the system (1) to assist identification of a suitable product from a set of potentially suitable products according to the user's needs, the question being selected from a group of questions stored in the system (1), the computer readable code means in the article of manufacture comprising:

computer readable program code means for causing a computer to process product data stored in the system (1), define features of products in the set and product scores associated with respective products in the set, and rule data stored in the system (1), define rules relating answers associated with the questions to product feature constraints, to calculate question scores ( $Q_s$ ) for respective questions such that the question score ( $Q_s$ ) for each question is dependent on one of (a) the product scores of any products excluded from the set if the rule relating to an answer associated with that question is effective, and (b) the product scores of any products retained in the set if said rule relating to an answer associated with that question is effective; and

computer readable program code means for causing a computer to select the question to be presented to the user in dependence on the question scores ( $Q_s$ ).